

DRAFT SITE REGISTRY REPORT

PROPOSED WATER QUALITY ASSURANCE REVOLVING FUND (WQARF) SITE

Grant Road and Stone Avenue

Tucson, Pima County, Arizona

January 2016

Site Location

The Proposed Stone Avenue and Grant Road Water Quality Assurance Revolving Fund (WQARF) site (the Site) is an approximately 0.76 acre property located in the southeast corner of Stone Avenue and Grant Road, in Tucson, Arizona.

Site Background

The Site was formerly a dry cleaning facility (Supreme Cleaners) that operated from 1946 until the mid-1970s (Terracon, 2014). Currently, the property is occupied by Finishmaster, Inc., an automotive and industrial paint retail store. There is a solvent storage room in the northeast portion of the facility. The remainder of the Site is paved with asphalt except for a small gravel landscaped area in the northwest corner. Historical records indicate that tetrachloroethylene (PCE) was the primary solvent used for dry cleaning. (Terracon, 2015). Land uses within one mile of the Site include residential, light industrial, and commercial businesses. The City of Tucson is currently working on an expansion of Grant Road that will involve soil excavation and trenching along the northern edge of the Site.

The Site lies within the Basin and Range physiographic province, in the north to northwest-trending Tucson basin. The Tucson basin consists of approximately 12,000 feet of Cenozoic sedimentary deposits that are composed of four individual units. The units, from oldest to youngest, include the Oligocene Pantano Formation, Miocene and Pliocene Tinaja beds, Pleistocene Fort Lowell Formation, and late Pleistocene and Recent alluvium. Logs of wells within one-half mile of the Site indicate that the lithology generally consists of silty clay, hard clay, layers of caliche, and sand and gravel to a depth of approximately 75 feet below ground surface (bgs), and then layers of sand, gravel and clay to at least 220 feet bgs. In the vicinity of the Site, perched groundwater is found at a depth of approximately 55 to 87 bgs, but the perched groundwater may not be laterally continuous since some well logs do not mention it. In September 2015, the depth to groundwater at a nearby non-active well was 221.59 feet bgs. The groundwater gradient in the regional aquifer is approximately 0.005 in a north to northwesterly direction (Tucson Water, 2015).

In December 2014, PCE was detected in four sub-slab soil-gas samples at concentrations ranging from 22,000 to 450,000 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) (Terracon, 2015). The U.S. EPA Region IX Regional Screening Level for PCE in industrial air is $47 \mu\text{g}/\text{m}^3$. In June 2015, a leaking underground storage tank (LUST) site located immediately north of the Site found PCE at 515 micrograms per liter ($\mu\text{g}/\text{L}$) and trichloroethylene (TCE) at $5.73 \mu\text{g}/\text{L}$. One of the LUST site SVE wells contained PCE at $78 \mu\text{g}/\text{L}$ in perched groundwater in March 2015 (Western, 2015). In 2005, PCE was detected in the regional aquifer in one of two Sleepy Hollow Mobile Home Park domestic wells at a concentration of $2.8 \mu\text{g}/\text{L}$ (ADEQ, 2015). The Sleepy Hollow Mobile Home Park is located approximately 0.6 miles west-northwest of the site.

Given the high soil-gas concentrations found, the primary source of contamination at the Site is most likely the former dry cleaning facility that previously occupied the Site. However, there are other potential

sources near the Site including the LUST site located approximately 150 feet directly north of the Site and Home Laundry & Dry Cleaning located in the northwest corner of Stone Ave. and Grant Rd. AZMapper also shows five other current or former dry cleaners within one-half mile of the Site.

Potential exposure pathways at the Site include inhalation via vapor intrusion; contact with contaminated soil; and ingestion, inhalation, and dermal contact with contaminated well water. According to ADWR records, there are 14 domestic or municipal wells within one mile of the Site that may still exist, and one with an unknown use. One of the 14 wells is an exempt well for Kings Trailer Water Company that served a mobile home park located approximately a quarter mile downgradient of the Site, but a recent site visit revealed that this well is inactive. Of the 13 remaining wells, two are inactive Tucson Water wells and two are inactive Sleep Hollow Mobile Home Park wells. This mobile home park is now connected to City of Tucson water. Another mobile home park well is located approximately 0.5 miles southwest (cross-gradient) of the Site and may still be active. The other seven wells in ADWR records also appear to still be active. The potential receptors near the Site include residents, businesses, and road/utility workers.

A likely pathway for PCE to have migrated from the former Supreme Cleaners facility (Site) to perched groundwater is vapor phase transport down to approximately 50 feet bgs where it may have migrated laterally to the north within several thin gravel layers or in perched groundwater. Because the clay aquitards appear to be discontinuous, there is a potentially complete contaminant transport pathway into the regional aquifer from this Site, and there are domestic wells within 0.6 mile of the release.

E&E Score

The Eligibility and Evaluation (E&E) form is attached. The Stone Ave. and Grant Rd. PI Site E&E score is 45. Also attached is the E&E Social and Economic Factors.

Rationale for Registry Listing

Investigations conducted at the Site have shown sub-slab PCE soil gas ranging up to 450,000 $\mu\text{g}/\text{m}^3$ and PCE in perched groundwater up to 515 $\mu\text{g}/\text{L}$. PCE has also been detected in the regional aquifer downgradient of the Site at 2.8 $\mu\text{g}/\text{L}$. Therefore, it is recommended that the site be added to the WQARF Registry pursuant to Arizona Revised Statutes § 287.01(D).